

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P311797

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-S-CA08-W2A-U-3500K**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

**Test Information**

Test Method: LM-79-08  
Report Number: P311797  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24FCZ2-75HE-UNV-L82765-S-CA08-W2A-U-3500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET  
Light Source: (336) 3500K TUNABLE CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: 

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

**Summary**

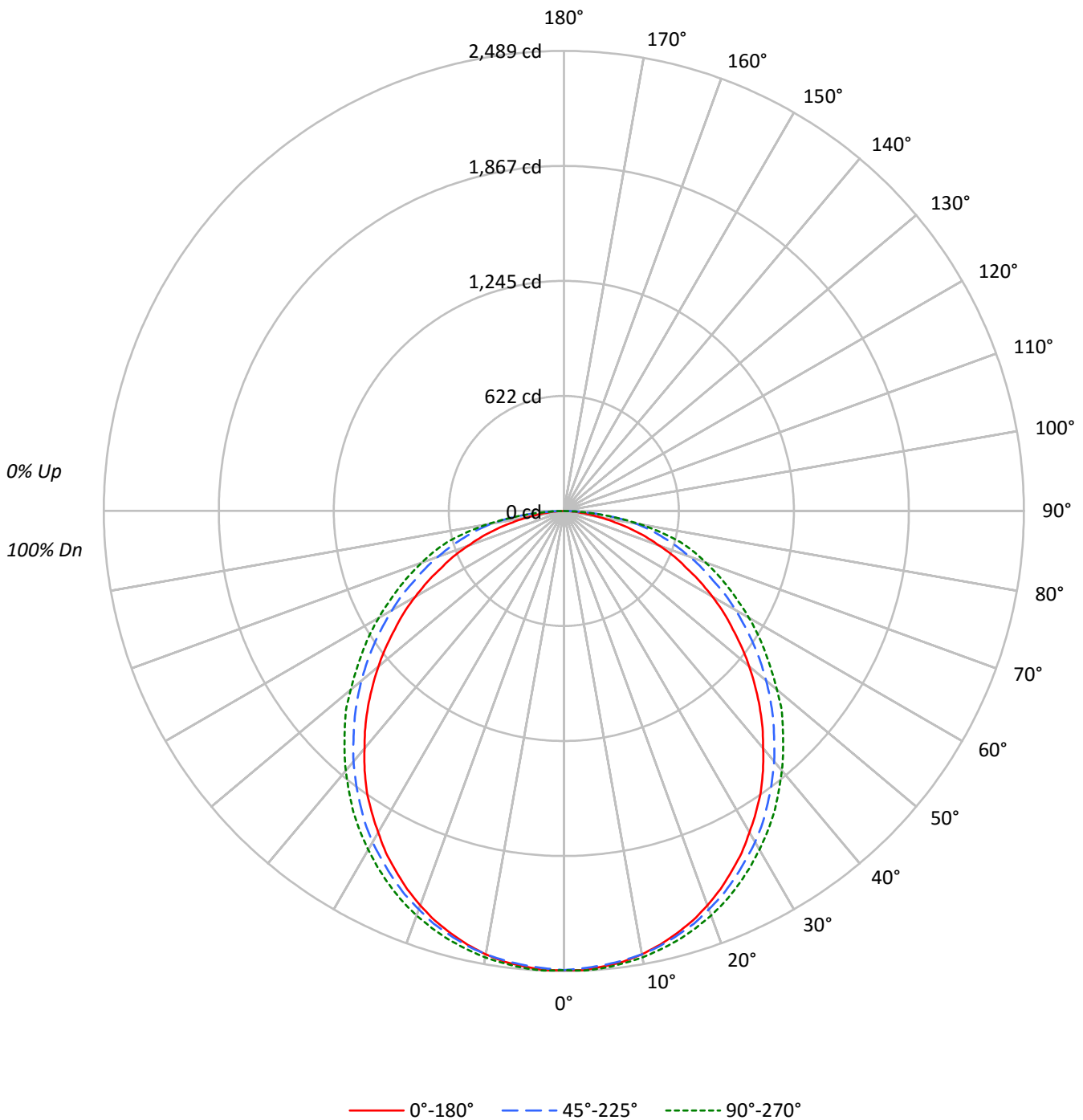
Lumens per Lamp: N/A  
Luminaire Lumens: 7072.0 lumens  
Efficiency: N/A  
Efficacy: 112.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 63.1  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	3343	3343	3343
5°	3340	3331	3353
10°	3327	3327	3351
15°	3295	3310	3345
20°	3252	3284	3335
25°	3191	3252	3315
30°	3120	3214	3287
35°	3051	3162	3262
40°	2947	3109	3224
45°	2851	3048	3189
50°	2741	2991	3150
55°	2619	2935	3119
60°	2496	2889	3113
65°	2338	2839	3132
70°	2165	2854	3217
75°	1939	2908	3398
80°	1567	3081	3324
85°	1179	2705	2635



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	235.2	3.3
10°-20°	672.1	9.5
20°-30°	1010.3	14.3
30°-40°	1203.4	17.0
40°-50°	1231.6	17.4
50°-60°	1108.8	15.7
60°-70°	870.8	12.3
70°-80°	565.2	8.0
80°-90°	174.8	2.5
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1917.5	27.1
0°-40°	3120.9	44.1
0°-60°	5461.3	77.2
0°-90°	7072.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7072.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2484	2484	2484	2484	2484	
5°	2473	2478	2466	2480	2482	235
15°	2365	2372	2377	2397	2401	667
25°	2150	2168	2190	2226	2233	990
35°	1858	1880	1925	1972	1986	1159
45°	1498	1534	1602	1662	1676	1155
55°	1116	1166	1251	1316	1330	1001
65°	734	791	892	966	984	731
75°	373	445	559	636	654	395
85°	76	142	175	171	171	92
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2484.4	2484.4	2484.4	2484.4	2484.4
2.5°	2486.7	2486.7	2475.5	2486.7	2488.9
5°	2473.2	2477.7	2466.5	2479.9	2482.2
7.5°	2459.7	2459.7	2453.0	2466.5	2468.7
10°	2435.0	2437.3	2435.0	2450.7	2453.0
12.5°	2403.6	2408.1	2410.3	2426.0	2428.3
15°	2365.4	2372.1	2376.6	2396.8	2401.3
17.5°	2322.7	2329.4	2340.7	2363.1	2367.6
20°	2271.0	2280.0	2293.5	2322.7	2329.4
22.5°	2214.9	2223.9	2246.3	2273.3	2284.5
25°	2149.7	2167.7	2190.2	2226.1	2232.9
27.5°	2084.6	2100.3	2129.5	2167.7	2176.7
30°	2008.2	2032.9	2068.9	2107.1	2116.0
32.5°	1934.1	1958.8	2001.5	2041.9	2053.1
35°	1857.7	1880.2	1925.1	1972.3	1985.8
37.5°	1770.1	1799.3	1848.7	1895.9	1909.4
40°	1678.0	1713.9	1770.1	1819.5	1835.3
42.5°	1590.4	1628.6	1684.7	1738.7	1756.6
45°	1498.3	1534.2	1601.6	1662.3	1675.8
47.5°	1404.0	1444.4	1516.3	1576.9	1599.4
50°	1309.6	1352.3	1428.7	1491.6	1505.0
52.5°	1215.3	1260.2	1341.1	1408.4	1415.2
55°	1116.4	1165.8	1251.2	1316.3	1329.8
57.5°	1026.6	1069.3	1161.4	1228.7	1244.5
60°	927.7	974.9	1073.7	1136.6	1156.9
62.5°	833.4	882.8	986.1	1049.0	1067.0
65°	734.5	790.7	891.8	965.9	983.9
67.5°	649.2	703.1	810.9	882.8	900.8
70°	550.4	611.0	725.6	799.7	817.7
72.5°	465.0	527.9	642.5	714.3	741.3
75°	372.9	444.8	559.3	635.7	653.7
77.5°	283.0	366.2	483.0	541.4	541.4
80°	202.2	289.8	397.6	424.6	429.0
82.5°	132.5	217.9	294.3	292.0	292.0
85°	76.4	141.5	175.2	170.7	170.7
87.5°	29.2	58.4	62.9	62.9	60.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)